GVNW

February 24, 1997

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William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW Room 222
Washington, DC 20554

Dear Mr. Caton:

Enclosed are the original and four copies of the reply comments of GVNW Inc./Management in response to the Commission's Public Notice in CPD Docket No. 97-2 . A diskette containing the filing is also enclosed in the package to Wanda M. Harris.

Also enclosed is one copy of our reply comments to be stamped and returned in the enclosed self addressed stamped envelope.

Any questions regarding this filing may be directed to me or Jeff Smith at (503) 624-7075.

Sincerely,

Jeffrey T. Smith for

Kenneth T. Burchett
Vice President

cc: International Transcription Service
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Encl.

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
The Use Of Computer Models	)	CPD Docket No. 97-2
For Estimating Forward-Looking	)	
Economic Costs	)	
	)	
A Staff Analysis	)	
	)	

REPLY COMMENTS OF GVNW INC./MANAGEMENT

I. Introduction

GVNW Inc./Management (GVNW) is a management consulting firm which provides financial and regulatory consulting services to independent telephone companies. These reply comments focus primarily on the impact the issues raised in the staff analysis will have on small LECs and, ultimately, on the provision of quality, affordable universal service in rural America.

ONE SIZE DOES NOT FIT ALL LOCAL EXCHANGE CARRIERS

While the recent workshop[1] raised more questions than they answered, panelists for the most part agreed on one thing: "that more study is required before the total impact of the application of these models is fully understood[2]". We agree with the comments

[1] On January 14-15, 1997, the Joint Board on universal service conducted workshops relating to the selection of a proxy model for determining the costs of providing services supported by the universal service support mechanisms.
[2] Comments of the Rural Telephone Coalition and GVNW Inc./Management, CC Docket No. 96-45, January 24, 1997, pg. iii (hereafter RTC/GVNW).

offered by the Wyoming Public Service Commission[3] that "one size does not fit all". This being the case, perhaps at least two sizes are needed.

ISSUES FOR SMALL AND RURAL COMPANIES NEED A SEPARATE PROCEEDING

In our joint comments with the RTC, we urged "the Commission to invite public comment on the specifics of the updated models once they are made available.[4] In these reply comments, we further concur with the recommendation first offered by PTI at the workshops and reflected in the initial comments of the USTA[5]: *As the Joint Board itself recognized, there must be an opportunity to "tailor the model for rural companies" in order to "take into consideration the unique situation of rural carriers." USTA recommends that the Commission establish a task force under Joint Board auspices to evaluate the appropriateness of the model for rural carriers and to make recommendations concerning whether the model chosen for non-rural carriers (or any other model) can be utilized for rural companies. The efforts of the task force could be completed during the three-year transition period recommended by the Joint Board.*

An important facet of such an effort is a thorough validation of the modeling framework. As we stated in our joint comments[6] on January 24, "the validation must begin at the physical facilities level, with actual engineering studies."

[3] CC Docket No. 96-45, page 7.
[4] RTC/GVNW at iii.
[5] USTA Comments in CPD Docket No. 97-2, page 7.
[6] RTC/GVNW at iv.

Even with a separate proceeding, some small LECs may be forced to consider adopting a proxy approach sooner, if the Joint Board's freeze recommendations are not altered. We continue to urge the Commission to reject the Joint Board recommendation that would freeze universal service support on a per-line basis, as this would serve to retard plant upgrades and infrastructure deployment in rural areas.

THE COMMISSION SHOULD ADD TWO CRITERIA TO THE JOINT BOARDS' LIST

The eight criteria found in the Joint Board recommendation[7] provides a starting point for the Commission's deliberations. GVNW agrees with the item that provides that "all underlying data should be verifiable, engineering assumptions reasonable, and outputs plausible." GVNW offers two additional criteria for the Commission's consideration:

1) **Any proxy adopted, if ultimately applied to small and/or rural local exchange carriers, must promote the advancement of universal service as required in Section 254 of the Communications Act.**

[7] *Recommended Decision* in CC Docket No. 96-45 at para. 277.

In order to avoid a confiscation of LEC property[8], any targeting and determination of an incumbent LECs high cost support must account for embedded costs. In his speech to the Competitive Policy Institute on January 14, 1997, Chairman Hundt recognized this situation in acknowledging that the Commission must address the issue of incumbent embedded cost in the proceedings on universal service and access charge reform. We also note with interest the Federal Communications Commission attorney's comments in the proceeding before the 8th Circuit Court of Appeals: "that embedded costs should be addressed in the access and universal service proceedings."

2) Any model must provide for a fully-functioning network that does not permit degradation of existing levels of service to customers.

The intent of the Communications Act of 1996 was, *inter alia*, to promote facilities-based competition and promote the continuation of affordable, universal service. In order to assure this standard is met, several things are necessary.

First, inputs and assumptions must be verified against actual engineering data. Any testing and evaluation must involve a reconciliation to actual engineering studies. At the Joint Board workshops, GVNW submitted on the record[9] the inability of the BCM2 model to accurately estimate the number of customers served. Others have claimed that the Hatfield model does not reflect adequate distribution plant to provide service to existing customers. This is not a trivial point, as it is necessary to serve customers at their actual location, not where a model thinks they might or ought to be.

[8] See e.g., GVNW Comments and Reply Comments in CC Docket No. 96-262.
[9] See comments of Robert Schoonmaker and Lisa Hanselman

THE RELEVANT ANALYTICAL FRAMEWORK IS TO AN EXISTING, FUNCTIONING NETWORK

In his opening remarks on January 14, 1997, Glenn Brown of US West offered the following: "Before we depart from a proven trend of what it has taken to provide a given and known level of quality of service, let's make sure we've got some validation and that it's moving the network in the right direction."

In his letter of the same date to Chairman Hundt, Professor Alfred Kahn declared he was in "fundamental disagreement" with those who propose a "blank slate" versus the actual expected costs of an existing (LEC). Kahn asserts that the relevant costs are the costs that will actually be incurred by a carrier that has a fully functional network.

In this letter, Kahn states in part: *The general economic principle that they cite clearly requires, however, that the correct pricing signals inform consumers of the costs that society will actually incur if they take somewhat more of each good or service. Advocates of the 'blank slate' version of TELRIC typically assume that that is the level to which competition would drive price, if it were effective. They are mistaken. In a world of continuous technological progress, it would be irrational for firms constantly to update their facilities in order completely to incorporate today's lowest-cost technology,*

as though starting from scratch. Investments made today, totally embodying today's most modern technology, would instantaneously be outdated tomorrow and, in consequence, never earn a return sufficient to justify the investment in the first place.

Other commenters[10] in the access reform proceeding offer similar testimony. In the context of this staff analysis, these noted academics offer that the definition as reflected in the staff analysis for forward looking costs is an improper basis for regulatory costing (and pricing) decisions. The more appropriate basis is the expected costs of an actual (existing) LEC. Further, the definition in the staff analysis is deficient in that it does not recognize the legal right of the incumbent LEC to recover its embedded costs incurred under prior **(and in the case of carriers of last resort current)** regulatory parameters that encompass a universal obligation to serve.

The Schmalansee and Taylor analysis[11] further concludes that ignoring embedded costs of incumbents results in: a diminution of investor faith, likely increasing capital costs; reduction in an incumbent's incentive to invest, especially in areas that are unremunerative (e.g., rural , high cost territory); and distortion of entrants' incentives.

The Strategic Policy Research study[12] demonstrates the need for examining the costs of a functional network, as the initial results from that study show the impact of underestimating forward-looking incremental costs. We concur with the SPR principals that this sort of "reality check" is much needed in this modeling debate.

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[10] See e.g., USTA comments, CC Docket No. 96-262, January 29, 1997 at 13-16, and the accompanying attachments to those comments: Schmalansee and Taylor, *Economic Aspects of Access Reform*, Attachment 1 at 17-22; Affidavit of J. Gregory Sidak and Daniel F. Spulber, Attachment 3, at 19-33.
[11] USTA Comments in CC Docket No. 96-262, Schmalansee and Taylor at 11-15.
[12] Strategic Policy Research, Inc., *A New Set of "Top-Down" Incremental Cost Measures*, November 17, 1996.

THE EVIDENCE SUPPORTS THE ASSERTION THAT ONE PROXY CANNOT MODEL BOTH LARGE AND SMALL CARRIERS IN THE VAST MAJORITY OF CIRCUMSTANCES

The comments in this proceeding and related aspects of other pending proceedings indicate that many have serious doubts about the use of models for both universal service and access charge reform.

We continue to support the position in our joint filing with the RTC: The Commission still needs to define the purpose for which it intends to adopt a model in this or any other proceeding.

To this point, proponents have suggested different purposes, ranging from targeting high cost support to providing a basis for pricing unbundled network elements.

It is doubtful that the record will find proxy models as adequate for determining the price levels for network elements. This is due to the fact that the information required to develop company-specific prices is simply not found in publicly available data.

One example of a problem with model design is in the area of structure sharing. The sponsors of the Hatfield model have asserted that[13] "...it is more than reasonable to assume, on a forward-looking basis that ILECs will be able to recover an increasing portion of their structure costs through joint ownership...". For rural carriers, this assumption is unrealistic and would appear to reflect a bias intending to understate the LEC's facilities costs.

In the feeder portion of the distribution network, it is difficult to accommodate any sharing due to the need to anticipate future growth. It is unrealistic to assume sharing with the power company, due to the rather obvious safety concerns and different trenching requirements for power (e.g., deeper trenches required) versus telephone cables. And, since virtually all power and cable television companies have feeder facilities already in place, a sharing assumption is nonsensical.[14] Also, the vast majority of CATV companies do not serve outside the town in rural America.

In attempting to model data for companies with several million access lines versus rural companies with several hundred, it is imperative to remember a key statistical phenomenon: **Variance is a function of the size of the population**. The customers most likely to become lost in the rounding for a rural company are the highest cost customers to serve - those at the end of a long loop. Yet, these are the very customers that the

[13] AT&T and MCI ex parte presentation on the Hatfield proxy model, CC Docket No. 96-45, January 7, 1997, page 20.
[14] It does appear that the BCPM offers more reasonable assumptions in this regard - see e.g., Benchmark Cost Proxy Model, January 31, 1997, Attachment 9 - Model Methodology.

Communications Act had in mind with the promulgation of Section 254 - mandating affordable rates for all Americans, not just those close to an urban switching center.

To date, no model includes all the required network elements. The BCM2 model did not include a provision for signaling or interoffice transport. Hatfield, at least through version 2.2 Release 2, did not include support or operator services.

CONCLUSION

We applaud the Commission staff for offering their current view of proxies and appreciate the opportunity to respond in this proceeding. We respect the efforts of the many parties who seek to find alternative costing methodologies that some believe are necessitated by the implementation of the Act.

However, one clear fact remains after a careful examination of the record to date. That is, that premature application of any of the proposed proxy models would be detrimental to small and rural companies serving the high-cost areas of the country and thus be detrimental to the continuation of affordable universal service in rural America.

Although BCM2 did do some modeling of non-Bell serving areas, Hatfield was quite deficient in this regard. Much more work needs to be done in order to ensure the accuracy of model architecture for low-density rural serving areas. We recommend, at a minimum, at least two very basic steps be considered. One, various levels of low-density small LEC service area should be analyzed by network engineers and the results

compared to model results. Two, publicly available network statistics should be compared to model output for a threshold determination of model design sufficiency.

With respect to at least the non-price cap companies, we urge the Commission to get it right, as opposed to meeting an arbitrary date.

Respectfully submitted,

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THE USE OF FORWARD-LOOKING ECONOMIC COST PROXY MODELS

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February, 1997

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Preface | THE USE OF FORWARD-LOOKING ECONOMIC COST PROXY MODELS

In January 1997, the Federal Communications Commission issued a public notice seeking comment on a paper prepared by FCC Staff that discusses fundamental policy issues and poses detailed technical questions about the use of cost proxy models in regulatory proceedings. In this report, ETI responds to parties' initial comments on the Staff paper, and also, to the extent feasible, reflects our preliminary analysis of the degree to which the three contending cost proxy models reflect sound economic principles and accurately model the cost of basic local exchange service. In the context of a universal service proceeding, it is critical to select parameters and design features that reflect the cost characteristics of the relevant service — primary residence local exchange service — which exhibits stable demand and is unlikely to confront meaningful competition for the foreseeable future. Furthermore, the network requirements for basic local exchange service are very different from those of the wide spectrum of competitive and new services that ILECs may seek to offer. Design decisions about a theoretical network should reflect those required to provide efficiently the services in question.

This report was prepared by Economics and Technology, Inc. on behalf of the National Cable Television Association. The project was conducted under the overall direction of Susan M. Baldwin and Dr. Lee L. Selwyn. Contributing to this work were Helen E. Golding, Michael J. De Winter, Paul S. Keller, Scott C. Lundquist, Jenny H. Yan, Melissa N. Markley, and Sonia N. Jorge. The project also benefitted from the suggestions and ideas of Richard L. Cimerman, Director, State Telecommunications Policy, NCTA, and Teresa A. Pitts, Director, State Telecommunications Policy, NCTA. The views in this report are those of ETI and do not necessarily reflect the views of the NCTA.

February 1997

Economics and Technology, Inc.
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Executive Summary | THE USE OF FORWARD-LOOKING ECONOMIC COST PROXY MODELS

The FCC is at a critical juncture, with only a few months left before the Commission must issue a decision on the Joint Board's recommendations for a universal service funding mechanism. The FCC continues to express interest in the possibility of using a single forward-looking economic cost model, not only for universal service purposes but also as a basis for pricing unbundled network elements and access charges. Although this is a laudable goal, and one that is most likely achievable given sufficient time, to the extent that time constraints apply, the FCC must first focus the use of cost proxy models in the universal service context. On the other hand, the legislative deadline affecting the universal service decision should not drive the FCC to cut short its efforts to implement a cost proxy model whose design and "inputs" are appropriate for the services being subsidized. Changes in competition for the provision of local exchange service are not so fast-paced or sizeable as to require that the new universal service funding mechanism be completely finalized and executable by May 8. If the FCC determines the core principles and framework for the USF mechanism, the objectives of the Act can continue to be met even if the FCC takes a few additional months to refine the design of the model and determine the appropriate input assumptions.

Efforts are under way to analyze the strengths and weakness of the most recent versions of cost proxy models that have been presented previously to the FCC — the Hatfield Model Version 3 and the Benchmark Cost Proxy Model (BCPM). In this report, we make a preliminary assessment of these revisions, as well as of the recently released Telecom Economic Model, in the context of our ongoing recommendations regarding the appropriate design criteria and input assumptions for modeling the forward-looking economic cost of basic telephone service. We continue to conclude that *misspecification* of the design criteria (such as the determination of USF support requirements at the CBG level, rather than at the wire center level) and of key input variables — including capital structure, deprecation, fill factors, and switching costs — would cause the use of these models to conflict with the fundamental public policy objective.

While we continue to conclude that none of the competing cost proxy models, as revised, are correctly specified for purposes of determining the forward-looking economic cost of basic telephone service, we also continue to be optimistic about the efficacy of using a cost proxy model approach. Model sponsors have made repeated efforts to respond to criticisms regarding the validity of the design and key inputs in their respective models. They have made significant progress by refining modeling assumptions and adding flexibility in user-specified inputs. There

is a disturbing trend, however, toward higher and higher USF requirements in each successive version of the models. In addition, there is a continued divergence between the *results* generated by competing models, with the model proffered by the incumbent LECs continuing to produce a significantly higher funding requirement. Much of this divergence can be explained by differences in the models' input assumptions. Based on the progress that has occurred over the past year, a cost proxy model can likely be implemented which allows the FCC and state regulators to determine the forward-looking economically efficient cost of universal service.

Although considerable progress has been made, it appears that regardless of how many versions of the competing models are filed, some fundamental perceptions and/or philosophical differences that are held by the sponsors will persist. To move forward, the Commission must be prepared to take a strong and, where necessary, prescriptive, hand. Ultimately it is the Commission that must set the public policy objectives that will guide final determinations about the appropriate design of a cost proxy model, and it must clearly articulate these public policy objectives. Within that context, the FCC should begin to take affirmative steps to establish the appropriate design criteria and data to reflect in the numerous user-specified values that are throughout the various contending cost proxy models.

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THE USE OF FORWARD-LOOKING ECONOMIC COST PROXY MODELS

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1 PUBLIC POLICY CONSIDERATIONS FOR EVALUATING COST PROXY MODEL

1.1 Background

On January 9, 1997, the Staff of the Federal Communications Commission (FCC or Commission) released a paper entitled "The Use of Computer Models for Estimating Forward-Looking Economic Costs, A Staff Analysis" (Staff Paper). The Staff Paper analyzes the use of cost proxy models for determining universal service support payments, cost-based access charges, and interconnection and unbundled network element pricing. The FCC indicates that the record that is gathered in response to the Staff Paper may be associated with the official record of three major pending proceedings: *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Access Charge Reform*, CC Docket No. 96-262, and *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996* ("Local Competition Proceeding"), CC Docket No. 96-98.[1] Among the many questions and Staff conclusions about which the FCC seeks comment are the following:

(1) Do the models include loop plant investment sufficient to meet demand?

(2) The Staff's conclusion that varying any of a number of input factors (e.g., the cost of capital or the depreciation rate) greatly affects the resulting prices or support payment amounts.

(3) Which inputs are most critical to the soundness of the prices that the models generate?

(4) Should the Commission take steps to establish specific inputs such as depreciation rates, capital costs, treatment of taxes, joint and common costs, and expenses, and, if so, how?

1. Public Notice DA 97-56, released January 9, 1997.

(5) The Staff's analysis of the modeling assumptions and inputs that are most likely to have a significant impact on estimated costs, with specific attention to: the choice of fill factors and the treatment of structure costs; methodologies for determining the appropriate forward-looking cost of capital and rate of depreciation; alternative methodologies that models could use to estimate forward-looking operating expenses; and sources of independent evidence that could be used to choose model inputs and verify model outputs.

The Public Notice also raises overarching questions as to the role of cost proxy models:

(1) Could a single model or combination of models be used for multiple regulatory objectives, i.e., in the three proceedings identified above? In the Staff Paper, Staff ask:

> For example, does a network specifically dedicated to universal service objectives differ in a significant way from the summation of network elements envisioned in Section 251? How should common costs be treated in the different applications — e.g., universal service or access reform — of the models?

(2) Could a hybrid model be developed that would incorporate the best features and assumptions of the individual models?

(3) Should the various inputs to the model (e.g., rate of return and depreciation) differ for the differing purposes (e.g., universal service, access charges, and unbundled network pricing)?

In this paper, we respond to many, but by no means all, of the questions posed by the FCC in its Public Notice, by Staff in the Staff Paper[2] and, where time permitted, to the positions taken by other parties in the Comments filed on February 18, 1997. To the extent possible, given the limited time since their release,[3] we have attempted to comment on the

2. The comments are also intended to assist the state members in their preparation of an analysis of the use of cost proxy models. (State members of the Joint Board will be submitting a report to the Commission on the use of proxy models and their application in this proceeding for funding universal service, prior to the Commission's decision in the universal service proceeding. Federal-State Board on Universal Service, CC Docket No. 96-45, Recommended Decision, November 8, 1996 ("*Recommended Decision*"), at ¶ 282.)

3. In attempting to update our analysis to stay current with the most recent versions of the cost proxy models, we continue to face certain logistical obstacles. The model sponsors are working in good faith to accomplish diverse modifications and enhancements to their models — many suggestions have been made by regulators and members of the industry which the sponsors are attempting to accommodate in a short period of time. The statutory time pressures and the complexity of the matter seem to have contributed to the fact that the model sponsors' filings are in some cases incomplete and in other cases yielding implausible results. For example, (continued...)

most recent versions of the Hatfield Model and the BCPM, as well as the new model submitted by the New Jersey Ratepayer Advocate.[4] As we are able to spend additional time analyzing these latest models, we hope to further refine and focus our comments on the numerous and important issued raised by the FCC.

1.2 In principle, a single cost proxy model design and, with limited exceptions, a consistent set of input variables should be specified by the FCC for use in all three proceedings

One of the fundamental questions that the FCC has posed is whether a single model can be used in the Commission's three major proceedings, and whether the same inputs should be selected for all three purposes. In order to address this question, it is helpful to consider the purposes of the various regulatory tasks.

While some parties propose a far more limited role for a cost proxy model,[5] we

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3. (...continued)
although both model sponsors had sought to meet a self-imposed filing deadline of January 31, 1997, neither the BCPM nor the Hatfield Model 3 were filed before February 7, 1997. Furthermore, in conversations with the model sponsors, ETI learned that the original submission of the BCPM contained files that were incomplete and thus yielded incorrect results. It was not until February 14, 1997 that the BCPM Sponsors submitted a version of the model with complete files, which was then available for ITS to ship to interested parties on February 18, 1997.

The February 7 filing of the BCPM included data only for Texas, and the sponsors submitted data for the entire country with their February 14, 1997 filing. Furthermore, unlike with the previous versions (the BCM and the BCM2), the model sponsors (presumably because of time constraints) did not file printed results for the individual states and for the country. To date, the Hatfield Model 3 only includes data for five states: California, Colorado, New Jersey, Texas and Washington. At this point, the national levels of USF support that are being proposed are unknown, which clearly impairs national debate and deliberation. Furthermore, even the replacement version of the BCPM (filed on February 14, 1997) yields implausible results. For example, ETI, in two separate sensitivity analyses (using the SWBT data for Texas), replaced the default values for the capital structure and the depreciation lives with the HM3's default values for these two parameters and reran the BCPM. While the default results indicate that the theoretical network serves 8,237,755 lines, the results for the two sensitivity analyses yield total served lines of 69,536, for each run — clearly an inaccurate outcome. Also, when ETI attempted to run the BCPM for Washington state, the names of the companies that serve Texas appeared. Upon further discussion with a BCPM Sponsor, we learned that the February 14, 1997 version has been replaced with a newer version that corrects this specific problem. The understandable delays in the filing of the new releases of the ILECs' model (the BCPM) and the IXCs' model (the Hatfield Model 3) and various operational difficulties have impeded ETI's ability to examine comprehensively the new versions. Despite these "glitches," the FCC can and should continue to move forward and address the many aspects of the cost proxy model debate.

4. Telecom Economic Cost Model, developed by Ben Johnson Associates, Inc.

5. USTA contends that a cost proxy model should not be used to quantify universal service support, but only to identify high cost areas for which support will be required. USTA Comments at 2-3. Clearly, however, the cost proxy models now under consideration are far more sophisticated than would be required simply to identify high
(continued...)

continue to believe that the purpose of a cost proxy model in a universal service context is to compute the cost of efficiently provided basic local exchange service at a geographically disaggregated basis (e.g., wire center or CBG) and to compare that cost to a threshold (e.g., a revenue or affordability threshold) in order to compute the level of high-cost support (if any) that is needed for each unique geographically disaggregated region.[6] (To the extent that a revenue-per-line threshold is adopted by the FCC, the cost proxy model may need to be modified slightly to reflect the costs associated with the services encompassed by the revenue threshold.) The purpose of a cost proxy model in the context of the *Local Competition* proceeding and the *Access Reform* proceeding is to establish forward-looking economically efficient rates for unbundled network elements (UNE), switched access, and special access that provide the proper signals to competitors about when to purchase network components and when to invest private capital to build alternative facilities for such components.

Comparing these purposes, one finds considerable overlap. At a fundamental level, these three proceedings share a common goal: to establish rates and/or support for basic telecommunications services and for components of basic telecommunications services that will allow for the economically efficient development of competition. This common purpose forms the basis for a common model and for having common input assumptions, in many instances.[7]

However, a "one-model-fits-all" approach will require a greater degree of versatility than one that, for example, will only be used to determine universal service funding requirements. For example, for a single model to be used both for determining USF requirements and setting the prices for UNEs, the model must be sufficiently robust to disaggregate accurately the retail service into its retailing and wholesale components. There are critical UNE-related costing questions that the contending models simply do not yet

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5. (...continued)
cost areas, and if the Commission were to limit the adopted model to that use alone, it would be forced to rely upon individual ILECs' specific cost studies to quantify universal service support, losing the benefits of employing a consistent, well-understood methodology and model for that purpose.

6. It is important to recognize that under none of the pending proposals would a cost proxy model be used to determine the quantity of *below-cost* households (and single-line businesses), i.e., situations where the cost of serving those segments of the subsidized customer class is *less than* the specified threshold. This is relevant to counter the arguments of those who seek to assess universal service funding need on an excessively granular level, which would result in a situation where carriers would claim credit for numerous "above-cost" "pockets" although adjacent pockets may be less costly. This is an example of where claims that the greater the level of disaggregation, the higher the level of "accuracy" are misleading because, in fact, the proposed granularity overlooks the significant economies of scale and scope present in a local exchange network.

7. The types of decisions that must be made by the FCC regarding a cost proxy model to be used in any of the three contexts include *engineering* decisions (such as whether copper distribution of long distances will provide service of an acceptable quality) and *economic/financing* decisions (such as the appropriate level of expenses to associate with the basic network efficiently provided).

address (such as nonrecurring costs). The decisions that are made for the purposes of the USF proceeding should be consistent with those made in the unbundling and access charge proceeding, but before a single model is adopted for all three purposes it must be demonstrated that the model can accurately disaggregate the cost of the retail service into the underlying cost components. Furthermore, in evaluating the appropriate input assumptions to incorporate in a cost proxy model, it is always important to consider the purpose to which the model is being applied.

Regarding the input variables, because in all three instances the network that is necessary to provide the relevant services is a *narrowband* network consisting of efficient, forward-looking technology, the assumptions about the cost of capital, depreciation, fill factors, copper-fiber crossover, and other critical inputs should generally be the same. There may be *limited* instances, however, in which there are distinctive costs depending on the purpose for which the model is being used. For example, a new entrant may seek, as a UNE, a technical capability that goes well beyond what is necessary for basic local exchange service. Developing the cost for that UNE may require changes in the basic input assumptions that are associated with capabilities widely deployed for the purposes of meeting universal service requirements. Another area in which input assumptions might diverge is in the category of non-plant-related expenses.[8] However, given the broad common purposes for these models, it is appropriate that unique input assumptions be more the exception than the rule.

Regardless of which of the three contexts is being considered, there are many types of cost that are plainly irrelevant and should not be captured by the model. For example, the following costs should be excluded from a cost proxy model that is to be used for any of the three purposes identified by the FCC:

- So-called "stranded investment."
- Costs relating to a carrier's deployment of broadband services, and other competitive services that have nothing whatsoever to do with the provision of basic unbundled elements, access to the local network for interexchange carriers and end users, and basic local exchange service to households and single-line business customers.
- Capital costs allegedly incurred as a result of the purportedly "riskier" telecommunications environment.

8. Some might argues that customer support costs are higher for residential (and single-line business) retail exchange service than for wholesale customers, while others would counter that the more complex nature of customer relationships at the wholesale "component" level creates additional costs.

- Costs associated with the implementation of the Telecommunications Act of 1996 (e.g., unbundling costs, number portability etc.).[9]

Based on the administrative efficiencies and overlapping objectives in the three regulatory proceedings, it is understandable that the FCC would prefer to adopt a single model which ensures consistency in fulfilling the three regulatory purposes. However, as noted in the Montgomery paper filed by ALTS, to the extent that the several regulatory purposes cannot be met in the short run through a single model, it is imperative that priority be given to resolving the cost proxy issues for universal service.[10]

1.3 Scope of service being modelled

The scope of service that would be subsidized through a universal service fund differs from the scope of service that could be supplied by the theoretical network that the models that have been filed in the universal service proceeding "deploy." The scope of the *subsidized* service (i.e., the service that would be eligible for high-cost support), as proposed by the Federal-State Joint Board on Universal Service (Joint Board), includes (for primary line residential customers and single-line business customers): voice grade access to the public switched network, with the ability to place and receive calls (including a level of local usage); touch-tone (dual-tone multifrequency signal); single-party service; access to emergency services; and access to operator services.[11] The models, however, deploy outside plant and switches that are capable of providing other services, such as discretionary and access services,[12] and, furthermore, the models deploy sufficient capacity to serve multiline businesses, additional residence lines, etc. In determining the appropriate, competitively

9. The fulfillment of the requirements of the Act results in changes that are broadly beneficial to all customers, including those who select new carriers as well as those who continue to be served by the incumbent carriers.

10. Montgomery, William Page, *Universal Service Cost Modeling Issues*, submitted by the Association for Local Telecommunications Services (ALTS), January 24, 1997. The paper continues, "[T]he larger goal of creating a model that can be used for a variety of purposes, while attractive with respect to efficient use of scarce regulatory resources, should not be undertaken until the universal service cost proxy issues have been resolved. The use of cost proxies for basic, universal voice grade telephone service is *necessary* in order to create an open, competitively-neutral system. Further use of such a model for all pricing purposes is merely desirable at this time....Indeed, the pricing of unbundled network elements will differ from the application of the cost proxy model in the universal service context. Many additional unbundled elements are required for fair competition, including loops supporting ISDN, HDSL and other capabilities that are not now part of the definition of universal service."

11. *Recommended Decision*, at ¶¶ 45-53.

12. As stated by the Joint Board in its explanation of its rationale for a revenue-per-line benchmark, such a benchmark "would be consistent with the cost estimation process used to determine the cost of service in high cost areas." *Recommended Decision*, at ¶ 161. In other words, the proposed threshold recognizes the revenues that are inextricably linked to the provision of basic local exchange services.